

DERWENT-ACC-NO: 1993-134923

DERWENT-WEEK: 199317

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TITLE: Organic waste treatment for soil amendment - by adding clay prior to commencement or during early treatment stage to complex contaminant to organic fraction to reduce the mobility of contaminants

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PATENT-FAMILY:

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AU 9222081 A	March 11, 1993	N/A	000 B09B 003/00
AU 661703 B	August 3, 1995	N/A	000 B09B 003/00

APPLICATION-DATA:

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AU 9222081A	N/A	1992AU-0022081	September 2, 1992
AU 661703B	N/A	1992AU-0022081	September 2, 1992
AU 661703B	N/A	AU 9222081	N/A

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ABSTRACTED-PUB-NO: AU 9222081A

BASIC-ABSTRACT:

Treatment of organic material contg. contaminants comprises adding clay to the organic material prior to commencement or in the early stages of the treatment

process to react physically and chemically with the contaminants to complex the contaminants to an inorganic fraction to reduce the mobility of the contaminants.

The organic waste is pref. treated by microbial decomposition or composting. The organic waste is esp. sewage sludge and the clay is zeolitic, or a bauxite processing residue. Gypsum or an acidic salt is used as an amendment to clay. The clay is added in an amt. of upto 40 wt.% of fresh organic waste (esp. 1-30 wt.%). USE/ADVANTAGE - The process is cost-effective and reduces the mobility

of heavy metals in various organic wastes. The resulting organic waste is suitable for soil amendment. The waste may be sewage sludge, domestic waste,

commercial, industrial or agricultural organic waste and the contaminants may be Cd, Cu, Cr, Pb, Ni and Zn. The immobilisation causes the redn. of the soil solubility and reduces availability of heavy metals to plants compared with untreated waste. The resulting compost has greater stability and density. The half life of the organic fraction of the prod. is 5 times higher due to formation of very stable clay-organic matter complexes. The compost produced has improved water and nutrient retention and soil pH buffering capacity over conventional soil conditioners.

CHOSEN-DRAWING: Dwg.0/10

TITLE-TERMS: ORGANIC WASTE TREAT SOIL AMEND ADD CLAY PRIOR
COMMENCE EARLY TREAT

STAGE COMPLEX CONTAMINATE ORGANIC FRACTION REDUCE
MOBILE

CONTAMINATE

DERWENT-CLASS: D15 P43

CPI-CODES: D04-A01B; D04-B05;

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